



Unisphere Management Center

NMC-RX Element Management System Release Notes

Release 3.2.0

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Contents

NMC-RX Release Notes

Overview	1
Before You Start	2
About Release 3.2.0 Documentation	2
Contacting Customer Service	2
Updating the NMC-RX License Key	2
New Features/Enhancements	2
SMDS	2
ATM NBMA	3
Single-Click Object View	3
FTP Enhancement	3
L2TP Tunnel Service	3
Community Strings	3
VLAN Enhancements	3
GRE/DVMRP Tunnels	3
Tunnel Connections	4
Layer 2 Forwarding	4
Lost & Found	4
Virtual Router Enhancements	4
ERX Router Features Supported in the NMC-RX Application	4
Software Protocols	4
Module Types	5
Installation Information	5
Installing on a Windows NT System	5
For First-Time Installation	6
For Subsequent Installations	6
Installing on a Sun Solaris System	6
For First-Time Installation	7
For Subsequent Installations	7
Sybase Adaptive Server Installations on NT or Solaris	7
For First-Time Installation	7
For Subsequent Installations	7
Known Problems	8
Known Limitations	9

Troubleshooting	10
Fixed Problems	11

NMC-RX Release Notes

These *Release Notes* are for NMC-RX Element Management System Release 3.2.0 for managing ERX edge routers. Unless specified otherwise, information in these *Release Notes* pertains to both the Windows NT and Sun Solaris versions of the 3.2.0 software.



Note: *If the information in these Release Notes differs from the information found in the product documentation, follow these Release Notes.*

Topic	Page
Overview	1
New Features/Enhancements	2
ERX Router Features Supported in the NMC-RX Application	4
Installation Information	5
Known Problems	8
Known Limitations	9
Troubleshooting	10
Fixed Problems	11

Overview

The NMC-RX application allows you to manage, configure, and monitor the ERX systems in your network and to communicate with them to obtain a complete and accurate picture of the network services you provide to your customers.

Before You Start

Before you use the NMC-RX management application, Unisphere Networks suggests that you read these *Release Notes* in their entirety, especially the sections *Known Problems*, *Known Limitations*, and *Fixed Problems*.

**About Release
3.2.0
Documentation**

With NMC-RX, you receive the following documentation:

- Online Help (integral to NMC-RX)
- A PDF version of the *NMC-RX User Guide* (on the NMC-RX CD)

**Contacting
Customer
Service**

You can contact Unisphere Networks Customer Service in the following ways:

- Inside USA: 1-800-424-2344
- Outside USA: 1-978-589-9000
- Fax: 1-978-589-0077
- E-mail: support@unispherenetworks.com

**Updating the
NMC-RX
License Key**

If you need to update your license key after you install the NMC-RX application, choose NMC-RX Licensing from the Help menu. In the NMC-RX Licensing Information dialog box, you can change your license.

New Features/Enhancements

NMC-RX release 3.2.0 includes significant new features and enhancements and is compatible with ERX releases 2.x and 3.x through 3.2.x.

SMDS

Switched Multimegabit Data Service runs over the HSSI line module and GRE tunnel interfaces (IP tunnel interfaces set to GRE mode). The NMC-RX application now supports creation and deletion of this interface explicitly from the HSSI and GRE tunnel interfaces. It is also created automatically through creation of an SMDS tunnel connection object.

ATM NBMA The NMC-RX software supports nonbroadcast multiaccess (NBMA) networks. These types of networks interconnect more than two routers and have no broadcast capabilities. NBMA provides a nonbroadcast point-to-point connection consisting of a single IP address on top of several circuits. Each circuit terminates at a different physical device. For example, you can use NBMA to connect a system to multiple stations.

Single-Click Object View You can now open an object's configuration for viewing with a single click. You can enable or disable this feature by checking or clearing the Single Click Object View check box in the User Preferences panel of the user's profile.

FTP Enhancement In ConfigSync service, you are now able to configure a login and password. This capability provides enhanced security. The default login is *anonymous*. The default password is *discovery*.

L2TP Tunnel Service The NMC-RX application now offers full support for L2TP Tunnel Service modules.

Community Strings You can now set community strings in the user profile dialog box and change them dynamically while the NMC-RX application is running.

VLAN Enhancements The NMC-RX application now supports creation, modification, and deletion of virtual LAN (VLAN) major interfaces and VLAN subinterfaces. Once you create a VLAN object defined with a VLAN ID, you create or delete associations between an Ethernet port and this VLAN by using the Associate VLAN dialog box accessible from the Ethernet port in the Device Workshop.

GRE/DVMRP Tunnels The NMC-RX application now supports creation, modification, and deletion of IP tunnels set to either GRE or DVMRP mode. Creation of these interfaces is from the System folder in the Device Workshop. They are also created automatically through creation of an SMDS tunnel connection or IP tunnel connection object.

Tunnel Connections

The NMC-RX application facilitates the creation of required interfaces, on both endpoint devices, for IP tunnels and SMDS tunnels. With one dialog box, you see both endpoint IP tunnel interface parameters. For an SMDS tunnel connection, HSSI, SMDS, CBF, IP Tunnel, and CBF Connection interfaces for both endpoints are created for you. For an IP Tunnel Interface, IP Tunnel Interfaces for both endpoints are created for you.

Layer 2 Forwarding

The NMC-RX application supports connection-based forwarding (CBF). CBF interfaces can be created and deleted from SMDS interfaces. CBF connections, connecting HSSI-SMDS-CBF interface stacks to IP tunnel-SMDS-CBF interface stacks, are created either through the Associate HSSI or Associate IP Tunnel popup menu options from a GRE tunnel interface and HSSI line interface object, respectively.

You can also create CBF interfaces and connections through the creation of an SMDS tunnel connection.

Lost & Found

The NMC-RX application now displays objects that are orphaned. Objects, such as devices, are orphaned either when they are removed from a group or when they no longer have an association with a parent group. The Lost & Found folder, located in the Network Workshop, provides a centralized location that contains these unmapped groups and devices, allowing you to work with them easily.

Virtual Router Enhancements

You can now configure AAA attributes and associate DHCP relay, authentication, and accounting servers within the virtual router creation context.

ERX Router Features Supported in the NMC-RX Application

The following sections list the ERX software protocols and hardware modules supported in Release 3.2.0 of the NMC-RX application.

Software Protocols

The major software protocols supported in this release:

- Asynchronous Transfer Mode (ATM)
- Border Gateway Protocol (BGP)

- Bridged IP/1483
- Cisco HDLC
- Frame Relay (FR)
- Internet Protocol (IP)
- Multilink PPP
- Layer Two Tunneling Protocol (L2TP)
- Packet over SONET (POS)
- Point-to-Point Protocol (PPP)
- PPP over ATM
- PPP over Ethernet (PPPoE)
- PPP over Ethernet over ATM
- Simple Network Management Protocol (SNMP)
- Switched Multimegabit Data Service (SMDS)
- Nonbroadcast multiaccess (NBMA)

Module Types

The module types supported in this release are:

- CT3, CT1, CE1
- OC3, OC3-POS, OC3-ATM
- OC12-POS, OC12-ATM
- FE-2, FE-8, GE
- T3-ATM, T3-Frame
- E3-ATM, E3-Frame
- HSSI
- SRP
- Tunnel Service

Installation Information

Follow the information appropriate for your installation.

**Installing on a
Windows NT
System**

The following sections provide information on what to do if you are installing the NMC-RX software on a Windows NT system for the first time or if the application is already installed.

For First-Time Installation

If this is the first time you are installing the NMC-RX application on your NT system, see *NMC-RX User Guide, Chapter 2, Installing NMC-RX*, or read the Readme file provided on the NMC-RX CD.

For Subsequent Installations

All releases of the NMC-RX application currently require that you uninstall any prior installations of the NMC-RX software from the system before you install the latest version of the product.

To uninstall the previous NMC-RX software release:

- 1 Be certain that the NMC-RX Element Management System is not running.
- 2 Ensure that Polling Service and ConfigSync Service are not running.
- 3 Verify that there is no connection to either the NMC-RX database or the NMC-RXDemo database.
- 4 Click Start>Settings>Control Panel, and then double-click Add/Remove Programs.
- 5 Select NMC-RX from the list of installed software programs.
- 6 Click Add/Remove.
- 7 Click Uninstall.
- 8 When the uninstall program is completed, there is typically a notice stating that not all components could be removed. Manually remove the components by deleting the NMC-RX folder from the directory where it was installed.

Installing on a Sun Solaris System

The following sections provide information on what to do if you are installing the NMC-RX software on a Sun Solaris system for the first time or if the application is already installed.



Note: *The NMC-RX installation directory is created with permissions matching the defaults of the user installing it. All directories created under the NMC-RX installation directory have 777 (full access) permissions. In order to give others access to NMC-RX, be sure that the NMC-RX installation directory's permissions are set to 777, by executing the following command:*

```
chmod 777 <NMC-RX installation directory>
```

For First-Time Installation

If this is the first time you are installing the NMC-RX application on your Solaris system, see *NMC-RX User Guide, Chapter 2, Installing NMC-RX*, or read the Readme file provided on the NMC-RX CD.

For Subsequent Installations

All releases of the NMC-RX application currently require that any prior installations of the NMC-RX software be uninstalled from the system before installing the latest version of the product.

To uninstall the previous NMC-RX release:

- 1 Be certain that the NMC-RX Element Management System is not running.
- 2 Ensure that Polling Service and ConfigSync Service are not running.
- 3 Verify that there is no connection to either the NMC-RX database or the NMC-RXDemo database.
- 4 Run *NMC-RX_Uninstaller*.
- 5 Run the following:

```
rm -rf <NMC-RX installation directory>
```

Sybase Adaptive Server Installations on NT or Solaris



The following sections provide information on what to do if you are installing Sybase Adaptive Server Anywhere on either an NT or Solaris system for the first time or if the server is already installed.

Note: You must uninstall Sybase Adaptive Server 6 before installing Sybase Adaptive Server 7. Sybase Adaptive Server 7 is required for this NMC-RX release.

For First-Time Installation

The NMC-RX application requires that the Network Server option of Sybase Adaptive Server Anywhere be installed. If it is not installed, Sybase will not function properly. During the installation process of Sybase Adaptive Server, the option to install “Network Server (includes Personal Server with SQL Remote)” must be selected.



Note: Network Server is not the default option.

For Subsequent Installations

If the Network Server option of Sybase Adaptive Server is already installed and operating correctly on the system, you do not need to

re-install Sybase Adaptive Server to successfully install and run the NMC-RX Element Management System.



Caution: *If you are uncertain which option was installed on the system, uninstall and reinstall the Network Server option of Sybase Adaptive Server.*

To uninstall Sybase Adaptive Server from NT:

- 1 Click Start>Settings>Control Panel, and then double-click Add/Remove Programs.
- 2 Select Sybase SQL Anywhere from the list of installed software programs.
- 3 Click Add/Remove.

The Uninstall program runs.

- 4 When the uninstall program is completed, there is typically a notice that not all components could be removed. Manually remove the components by deleting the Sybase folder from the directory where it was installed.

To uninstall Sybase Adaptive Server from Solaris:

Run the following:

```
rm -rf <Sybase installation directory>
```

Known Problems

This section lists the known problems in Release 3.2.x:

- The following MIB exception is displayed when you run NMC-RX element manager system or the ConfigSync service: Cannot find module: ATM-FORUM-SNMP-M4-MIB. (This does not affect the proper running of the NMC-RX system.)
- You can create both an IP address and a PPPoE interface either directly on the Ethernet line interface or on a VLAN subinterface stacked on the Ethernet line interface. Problems may arise, however, when you delete PPPoE interfaces in the reverse order from which you created them, using either the NMC-RX application or the CLI. The PPPoE interface does not delete completely, and there is currently no way to delete it through the CLI. Also, in the case of the VLAN subinterface, the interface may no longer be recognized by the CLI.
- If you have a Frame Relay interface configured on a HSSI port (configured by the CLI), and you do a system update, you receive a

warning, and the Frame Relay interface is not learned by the ERX system.

- The uninstall program does not remove all registry key items, such as the NMCRX_HOME environment variable. This does not create a problem when you either upgrade or re-install a different version or point release.

Known Limitations

This section lists the known limitations in Release 3.2.x:

- Currently, the NMC-RX application does not support redundant modules. This feature will be supported in the future.
- For versions 3.2.0 and 3.2.1 of the ERX software, the VCD range in ATM circuit is 1–65535, but you are allowed to enter a value 1–2147483648. In later versions of the ERX software, 1–2147483648 is the correct range.
- When you use Bulk Services to create a large number of objects, you should currently limit the number of objects to 9000 maximum. Otherwise, you run the risk of running out of memory. To create additional objects, you can exit the NMC-RX application and then restart.
- The NMC-RX application does not currently support Cisco HDLC and Frame Relay interfaces on POS cards. Autodiscovery of these types of interfaces that were created via CLI produces a warning message.
- If you choose NMC-RX Help from the Help menu on a Windows NT system and your default Web browser is Netscape Navigator (version 4.76), Netscape Navigator will launch and display the WebHelp. However, if Netscape Navigator is already running, WebHelp will not be displayed, although the browser will be brought to the foreground.
- The current minimum setting allowed for the polling interval is 1 minute. If you set the polling interval to a value of less than 1 minute, Polling Service will continue to poll at the 1 minute minimum, and no error message is displayed.
- Currently, the NMC-RX application allows you to start multiple Polling and ConfigSync Services at the same time. Only the last service started will actually be utilized by the application. There will be no disruption of service by starting these additional services;

however, it is a waste of resources to do so, and currently no error message is displayed to indicate the displacement of the existing service. You should close all instances and restart.

Troubleshooting

If any of the following conditions appear, try the suggested workaround(s).

- When installing Sybase Adaptive Server Anywhere, the following message appears:

```
The ODBC resource DLL (C:\WINNT\System32\odbcint.dll) is a
different version than the ODBC driver manager
(C:\WINNT\System32\ODBC32.dll). Reinstall the ODBC
components to ensure proper operation.
```

Workaround – This error has no effect on Sybase or the NMC-RX application. Complete the installation and proceed as normal.

- The default port for Java RMI (Remote Method Invocation) is 1099. If this port is in use, Polling Service and ConfigSync Service do not run correctly and an error message appears.

Workaround – Go to the NMC-RX Resource Configurator and click the Polling Service tab. Change the RMI Registry Port from 1099 to another number (for example, try 1300). Now, click the ConfigSync Service tab and change the RMI Registry Port from 1099 to the same number.

- When starting Polling Service, the following message appears:

```
No access.
```

The *No access* error occurs if Polling Service does not have the appropriate permissions (admin community string) to establish the MaxPDUSize on the box to be an appropriate value for the size of PDUs that are sent via Polling Service.

Workaround – Verify the community strings that are being used by bringing up the NMC-RX Resource Configurator, either within the NMC-RX Client application or separately from the start menu. Telnet to the machine and verify the SNMP settings by checking the **show config information**. In particular, you must ensure that you have a community string with admin privileges configured. If the community strings all look correct, temporarily change all of the community strings to the *admin* community string. Once you have

successfully retrieved status from the NMC-RX application, go back and change the community strings to their original settings.

- There are two causes that prevent WebHelp from starting on Solaris:
 - > You have not defined the Netscape path in the PATH variable. This results in an error message being displayed in the NMC-RX window.

Workaround – Define the Netscape path.

- > You may not have permission to connect to the X server. This prevents Netscape from being started. When this happens, no error message is generated and you may think that the online help does not work properly.

Workaround – Enter the command `xhost < hostname >` in a term window. Doing this disables the X server security and allows the Netscape browser to be displayed.

Fixed Problems

The following problems, reported in Release 3.0.x, have been fixed:

- When you use the VLAN Association option on an Ethernet interface to stack the first VLAN on that interface, you must first create the VLAN major interface via the CLI before using the VLAN Association dialog. Otherwise, an SNMP Undo Error occurs. There is also no problem in adding or removing VLANs via the VLAN Association dialog.
- The NMC-RX application allows you to create duplicate servers. Except for the name, you can create a completely duplicate DHCP relay, authentication, or accounting server. When you update the system, a copy of the server you created is made and assigned to the virtual router. Every time you update the system another copy of the server is made.
- Configuration of a virtual router may result in an SNMP error when trying to associate a server set with it. The problem may be that one of the accounting or authentication servers associated with that server set has an invalid value for one of its attributes. To fix this problem, exit the virtual router configuration without saving. Check that all accounting and authentication servers associated with the server set have valid values in their attributes; then try to apply the server set to the virtual router again.

The following attributes should be checked:

- > UDP Port – should be 1–65535
- > Retry Count – should be 0–10 for ERX release 2.0, and 0–16 for ERX releases 3.0 and 3.1
- > Timeout – should be 3–10 seconds for ERX release 2.0, and 3 – 30 seconds for ERX releases 3.0 and 3.1
- > Max. Sessions – should be 10–255 for ERX release 2.0, and 10–4000 for ERX releases 3.0 and 3.1
- > Dead Time – should be 0–30 minutes